



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,972	06/10/2004	Stephane Hiron	68.0435	3971

35204 7590 04/24/2006

SCHLUMBERGER RESERVOIR COMPLETIONS  
14910 AIRLINE ROAD  
ROSHARON, TX 77583

EXAMINER

COY, NICOLE A

ART UNIT PAPER NUMBER

3672

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/709,972	<b>Applicant(s)</b> HIRON ET AL.	
	<b>Examiner</b> Nicole Coy	<b>Art Unit</b> 3672	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 40 and 41 is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/19/05; 6/10/04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-10, 14-17, and 38-39 are rejected under 35 U.S.C. 102(e) as being anticipated by French (USP 6,595,296).

With respect to claim 1, French discloses a valve for use with a control line disposed in a wellbore, comprising: a shuttle valve (24) functionally connected to the control line (65); the shuttle valve (24) adapted to enable pressure transfer through the control line from both a downhole and an uphole direction during normal operating conditions (see column 3 lines 46-52); and the shuttle valve (24) adapted to seal the control line when a pressure spike occurs from the downhole direction (see column 3 lines 46-52 and column 2 lines 3-5 and figures 1A and 2, wherein French discloses that the tool can be operated by flowing fluid into it or from it, thus a pressure spike occurs when fluid travels from the tool into chamber 14, thus moving shuttle valve 24 to seal control line).

With respect to claim 3, French discloses that a shuttle valve (24) is disposed in the control line (65).

With respect to claim 4, French discloses that the shuttle valve (24) is located in a housing (14).

With respect to claim 5, French discloses that the housing (14) is a joint that connects two tubing pieces together (wherein 14 connects to 12; see figure 1B).

With respect to claim 6, French discloses that the control line is functionally connected to a downhole tool (see column 1 lines 36-40).

With respect to claim 7, French discloses that the downhole tool comprises a valve, a packer or a perforating gun (see column 3 lines 23-39, wherein French discloses a valve).

With respect to claim 8, French discloses that the shuttle valve comprises a shuttle (24) slidably disposed within an orifice located on a constrictor in the housing (14; see figures 1A and 2).

With respect to claim 9, French discloses that the constrictor includes at least one opening to allow fluid flow therethrough (see figures 1A and 2).

With respect to claim 10, French discloses that the shuttle (24) is movable between a first position, in which a first shuttle surface seals against a first housing surface to prevent flow of fluids from the downhole direction (see figure 1A), and a second position, in which a second shuttle surface seals against a second housing surface to prevent flow of fluids from the uphole direction (see figure 2).

With respect to claim 14, French discloses that the shuttle valve (24) comprises a shuttle slidably disposed within a cavity (see figure 1A) in the housing and the shuttle transfers pressure within the control line (wherein the shuttle would inherently transfer

pressure in the control line as it moved from the position shown in figure 1A to the position shown in figure 2).

With respect to claim 15, French discloses that the shuttle includes at least one dynamic seal (32) to enable a sealing and sliding movement of the shuttle against the cavity.

With respect to claim 16, French discloses that the shuttle is movable between two normal operating positions, a first position in which a first volume remains in the cavity adjacent the first end of the shuttle (see figure 1A) and a second position in which a second volume remains in the cavity adjacent the second end of the shuttle (see figure 2).

With respect to claim 17, French discloses that the shuttle includes a downhole pressure spike position wherein the second shuttle end abuts the uphole surface of the cavity and does not allow pressure communication from the downhole direction (see figure 1A).

With respect to claim 38, French discloses a barrier for use with a control line disposed in a wellbore, comprising: a valve (24) functionally connected to the control line (65); the valve adapted to enable pressure transfer through the control line from both a downhole and an uphole direction during normal operating conditions (see column 3 lines 46-52); and the valve adapted to seal the control line when a pressure spike occurs from the downhole direction (see column 3 lines 46-52 and column 2 lines 3-5 and figures 1A and 2, wherein French discloses that the tool can be operated by

flowing fluid into it or from it, thus a pressure spike occurs when fluid travels from the tool into chamber 14, thus moving shuttle valve 24 to seal control line).

With respect to claim 39, French discloses a method for preventing blow-outs in a wellbore including a control line, comprising: sealing the control line with a valve in case of a blowout (see figure 1A); and transferring pressure through the valve and control line from both a downhole and an uphole direction during normal operating conditions (see column 3 lines 46-52).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 20-32, 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over French.

With respect to claim 2, French does not disclose that the pressure spike is a blow-out in the wellbore. However, French discloses that there are seals for sealing the flow control means and isolating the ports. Furthermore, blowouts can occur in all wellbores. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention that the pressure spike would comprise a blow-out.

With respect to claims 20 and 27, French discloses a system for preventing blow-outs in a wellbore including a control line, comprising: a safety valve adapted to seal a

Art Unit: 3672

tubing disposed in the wellbore in case of a blow-out (see column 3 lines 23-39); and a valve (24) adapted to seal the control line in case of a blowout (wherein valve 24 is adapted to seal the control line in case of a blowout as French discloses that valve can seal either the control line or the fluid outlet port to the downhole tool, see column 3 lines 46-52), wherein the valve enables pressure transfer through the control line from both a downhole and an uphole direction during normal operating conditions (see column 46-52, wherein pressure is transferred as fluid flows through the valve during normal operating conditions). French does not disclose a wellhead adapted to seal an annulus between the tubing and the wellbore in case of a blow-out. However, it is well known in the art to seal an annulus between the tubing and the wellbore in case of a blow-out. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to seal the annulus between the tubing and the wellbore in order to control pressure in case of a blow-out.

With respect to claim 21, French discloses that the valve comprises a shuttle valve (24).

With respect to claim 22, French discloses that the shuttle valve (24) is located in a housing (14).

With respect to claim 23, French discloses that the housing (14) is a joint that connects two tubing pieces together (wherein 14 connects to 12, see figure 1B).

With respect to claim 24, French discloses that the control line (65) is functionally connected to a downhole tool (see column 1 lines 36-39).

With respect to claim 25, French discloses that the control line (65) is used to hydraulically actuate the downhole tool (see column 1 lines 36-39).

With respect to claim 26, French discloses that the downhole tool comprises a valve, a packer or a perforating gun (see column 3 lines 23-39).

With respect to claim 28, French discloses that the transferring step comprises shuttling the valve in the uphole and downhole directions depending on the direction of the higher pressure (see column 3 lines 46-52).

With respect to claim 29, French discloses further comprising functionally connecting the control line to a downhole tool.

With respect to claim 30, French discloses hydraulically actuating the downhole tool through the control line (see column 3 lines 23-39).

With respect to claim 31, French discloses biasing the shuttling movement of the valve in at least one direction (see figures 1A and 2).

With respect to claim 32, French discloses biasing the shuttling movement of the valve in both the downhole and uphole directions (see figures 1A and 2, and column 3 lines 46-52).

With respect to claim 34, French discloses that the biasing step comprises providing excess volume in a cavity that houses the shuttle (see figure 1A).

With respect to claim 35, French discloses providing a shuttle sealingly slidably disposed within a cavity in a housing (see 32, which seals the shuttle).

With respect to claim 36, French discloses that the shuttle prevents fluid communication in the control line (see figure 1A and column 3 lines 46-52).



5. Claims 11-13 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over French in view of Schultz et al.

With respect to claims 11-13 and 33, French does not disclose two springs attached to the shuttle valve. Schultz et al. teaches springs around shuttle valves in order to bias the shuttle valve in a desired position. See column 4 lines 28-37. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify French by including two springs as taught by Schultz et al. in order to bias the shuttle valve in a desired position.

6. Claims 18, 19 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over French in view of Schwendemann (USP 6,450,263).

With respect to claims 18, 19, and 37, French does not disclose a rupture disk. Schwendemann discloses a rupture disk which is used to isolate chambers from annular well pressure, and which can be ruptured to connected two different pressure regions. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify French by including a rupture disk as taught by Schwendemann in order to isolate two different pressure regions and then connect them when desired.

***Allowable Subject Matter***

7. Claims 40 and 41 are allowed.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole Coy whose telephone number is 571-272-5405. The examiner can normally be reached on M-F 8:00-5:30, 1st F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

nac

  
William Neuder  
Primary Examiner